

**Final Report for IMLS Sparks Ignition Grant LG-46-11-0103-11**

**Prepared by**



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## **Administrative Information**

North East Independent School District

North East Book Network (NBN)

Award Amount: \$24,\_\_\_\_\_

Total Project Cost: \$

Project Director: Richard L. Hasenyager, Jr.

## **Project Summary**

All libraries play an important role in developing a 21st century workforce, public school libraries might have the greatest access to a captive audience eager to learn and apply 21st century skills. Through the daily use of technology in the classroom, North East ISD (NEISD) students collaborate with other students, gain a deeper understanding of content and find tools to demonstrate creativity. Teachers use technology to engage students and access additional instructional materials. While many resources are available to today's students and teachers, finding the right fit between information and medium to create an authentic learning experience is a universal challenge facing school districts.

NEISD's Library Services department is actively engaged in overcoming that challenge to support 21st century learning strategies taking place in the classroom and entice a love for reading. District librarians participate in regular and meaningful collaboration with teachers in order to align library instruction with content areas (with a focus on the use of non-fiction texts) and differentiate instruction to meet the needs of all learners as well as model and promote the effective integration of technology and student-centered strategies to support the access, use, evaluation and creation of information. However, library support doesn't end there. It must extend to sharing and archiving the reading experience for the entire community.

Unfortunately, prior to creating the North East Book Network (NBN), the intellectual work generated from these 21st century classroom experiences was not centralized nor connected with NEISD's library system for the entire district to benefit. Student and teacher work was often posted to individual class web logs (blogs), teacher web pages, YouTube, Vimeo, and Animoto which creates a "search and find" environment for learners. This is counter to the principles published by the American Library Association

to improve information access and delivery. The absence of a centralized collection system was not a unique problem to NEISD – most school districts and their libraries share this dilemma.

To address this problem, NEISD incorporated a best practice from university libraries and created an Institutional Repository (IR). This tool is commonly used at the collegiate level as a collection point for student and staff work. Unfortunately, the practice of using an IR has not been widely implemented at PK-12 institutions. NEISD created this type of space and to offer a way for students to share their reading experiences across a larger community by creating and then storing digital book trailers to the NBN.

School librarians, classroom teachers, and students have been creating digital book trailers for some time. They were creating them and then posting them to places such as YouTube, Animoto, Vimeo and other video storage/creation sites. This resulted in several problems relating to the ability to access the created materials and linking them to the library catalog. Often times, district-owned computers prevented students to access this created content due to the filtering software or the version of the desktop operating system and browsers were not compatible to stream the content. At times this content was deleted due to changes of service from these web portals. One example of this practice was when one online tool began deleting digital content after it had be uploaded and made available for more than six months. These types of practices by online providers do lend themselves to be linked into the library catalog because it would require a constant check of the link to ensure they were still active. The NBN was created to provide a place to store digital book trailers in an environment in which these works could be archived and accessible on the terms of NEISD, and not to those of an outside provider.

## **Process**

Work on the North East Book Network (NBN) began in June 2012 with support from a Sparks! Ignition Grant by the Institute of Museum and Library Services. The funds from this grant were used to build an Institutional Repository (IR) using DSpace. The project resulted in the creation of training and marketing materials, student created digital book trailers, and a web presence that has been shared with the broader library community. These works may be discovered through the library catalog and viewed by using a wide range of browsers, operating systems, and mobile devices.

The project staff's first activity was to contract with a third party vendor to create the IR using DSpace. The Longsight Group was chosen due to their reputation in developing instances of DSpace with other educational and not-for-profit organizations. The vendor also provided hosting services for the IR, which was important since NEISD Library Services did not have the network infrastructure to host the project in house. Hosting the IR within NEISD would have required additional capital outlay that would have not been covered by the grant, and local funds were not available for such a purchase. Longsight's hosting provided additional benefits since they have a dedicated staff to support the software when there are problems or when updates need to be applied.

Longsight worked closely with project staff in creating NBN. This work was facilitated by NEISD's Coordinator of Library Systems. She worked with the vendor to set up the DSpace specifications, define the IR architecture, and to acquire a *Handle System* prefix that allows for the use persistent identifiers of digital objects. Once the instance of DSpace was created, Longsight traveled to NEISD to meet with project staff to test, troubleshoot, and make modifications to the IR to meet the goals of the grant. This work continued well beyond this meeting through a series of emails and telephone conversations. Longsight was very responsive to requests and wanted the project to succeed. One reason for this was that DSpace had not been used in the past as a means to exclusively display streaming video content.

One of the objectives of this grant was to find a way to link student created digital book trailers to the library's online public access catalog (OPAC). In the past, these digital assets were not searchable in the OPAC, and if one wanted to find a digital book trailer, he/she would need to search another database. To accomplish this goal, the Coordinator for Library Systems made changes to NEISD's ILS eLibrary by SirsiDynix, to customization of the OPAC's template to display the words "Click Here to View a Book Trailer" allows students to click on the link to begin streaming the digital asset.

The success of this project was dependent on the creation of guidelines and training documents. Three NEISD librarians and the Library Services Coordinator for 21st Century Skills were tasked with creating these resources to assist in training librarians and teachers.

A webpage was created as a landing page for How-To's and guidelines for the creation of digital book trailers, through the creation of a LibGuide page. Three campus librarians were trained to assist in creating this space, which can be found at <http://neisd.libguides.com/nbn>. Together, they reviewed and revised the Digital Works Student Permission Form and provided a list of guidelines and "How-To's." In these

pages, they provided links to royalty-free resources, which was extremely important since some of the works may not be covered under fair use.

Beyond the creation of training resources, the implementation of this project required a number of professional development opportunities for librarians and teachers. Three separate training sessions were held during librarian meetings. During this time, librarians were exposed to the LibGuide and were provided examples of exemplary digital book trailers. Librarians received additional training on the creation of book trailers at two optional offerings in how to use *Animoto*, a Web 2.0 tool that is used to create digital book trailers. Some librarians needed additional help and ten site visits were made to allow for one-on-one assistance. Librarians were encouraged to create book trailers with their students and to download the digital asset until they could upload them to the NBN.

Once the NBN was ready for students to submit their works, The Longsight Group provided a series of three webinars for librarians that walked them through the process of uploading and approving book trailers. Since classroom teachers do not approve book trailers uploaded into the NBN, Longsight provided three additional webinars that focused on the only submission process for teachers. Due to scheduling conflicts, not all librarians and teachers could attend these sessions, the webcasts were recorded and archived for those who were unable to attend a live session.

To promote the NBN, the three librarians that were a part of the project team were tasked with creating promotional materials. The librarians created posters and bookmarks to be distributed to schools. These materials used images and text to encourage students to create their own digital book trailers and upload them to NBN. It is also served as a method to remind teachers that there is a place to display student work electronically, which provides an authentic learning environment that further exemplifies 21st century learning.

Since student work was being solicited to be stored for an undetermined amount of time, a new consent form was created for parents to sign. In the past, most consent forms created by NEISD require a parent to renew their permissions yearly. Since an IR is an archive, and is designed to keep work indefinitely, the new permission form was created to request the parent's agreement for NEISD to store their student's work in perpetuity. Project staff met with general council to create a new form to meet this need.

Through this process, the project staff had to make several other changes to account for unforeseen challenges. The most apparent change was that of the timeline. The unanticipated experiences at the time of the grant application include technology issues including desktop operating systems, the use of mobile devices, the internal NEISD

network, and a reduction in library staff for 2011-2012. These barriers resulted in delaying the implementation phase of the grant until April 1, 2012. This delay had the greatest effect on the number of assets that were able to be included. By the time April arrived, there were only two months left in the school calendar and many of those dates were consumed with testing and end of year procedures.

NEISD's collaboration with Longsight required adjustments to the District's content filter, firewall, and network routing policies. The content filter needed to be adjusted to allow students and staff to view the site while on campus. Changes to the content filter were no small matter because of existing internal policies governing change which were not written in consideration of an IR-type of project. The change process involved educating both technology leaders and system administrators to the purpose and value of having an IR for student learning. The firewall and content filter changes were enacted in February of 2012 so that users were able to both search for videos on NBN & the OPAC and view the videos from their desktop and tablet computers.

Another important goal of the grant was branding NBN as North East ISD's Institutional Repository so that our NBN brand would be readily apparent to users within NEISD and to outside users of scholarly publishing tools and digital resource assets. Library Services requested the domain address [nbn.neisd.net](http://nbn.neisd.net) from our network services department. The process of assigning the external IP address given to us by our hosting company (Longsight) to domain name of nbn.neisd.net required written documentation that demonstrated our need of the branding. Technologically it was a simple change in our network routing tables. Philosophically, this was a large paradigm shift.

The final technology challenge was choosing which hardware and software NEISD could and would support for the student video creation and for end-user playback. Our final choice was to support NBN on both the Windows and the Mac (including ipad) platforms. The software choices for video creation are detailed elsewhere in this document. The MP4 format was chosen as the default format for the videos because of its flexibility of in our environment, for the availability of software to convert videos created in other formats (by mistake) into the MP4 format, for the resulting size and quality of the MP4 video playback, and finally and possibly most importantly, for the ability of the IR's encoded video player to work with the MP4 format on both the PC and Mac platforms within our district. The player we chose was Flare Player a freeware program by Alex McCaw available at <http://flarevideo.com/#overview>. Flare Player supports both HTML 5 standards and has a Flash fallback option for browsers that could not support HTML 5. We were able to achieve one-click video play back on any NEISD owned desktop or mobile device utilizing a wide range of browsers.

For the 2011-2012 school year, NEISD was forced to make reductions to its overall budget due to cuts made by the State of Texas. NEISD library staffing was affected by this as there was a reduction of certified librarians and library assistants. These cuts resulted in less time for the campus librarian to devote to grant activities. The school librarian needed to focus on more of the activities that would have been dedicated to a library assistant such as circulating books, shelving books, and other clerical types of activities. This caused them to spend less time on instructional activities including collaborating with classroom teachers, direct instruction to students, and implementing the NBN to the level that was anticipated.

## **Project Results**

The project team learned many lessons. The challenges were discussed in the previous section, but the lessons learned are important to understand because the K-12 environment is much different that will be found in other libraries or museums that do not face the same network or content filtering issues. If these types of institutions provide content to public schools it is important to ensure that they create content that is assessable through a variety of operating systems and devices.

Due to the challenges NEISD encountered throughout the project, the number of student created book trailers were fewer than anticipated. However, the excitement of the overall project were greater. At the end of the school year, there were many questions about whether or not this new resources would be available the next school year. When they were told "yes," they were excited and looked forward to contributing more digital book trailers in 2012-2013.

The NBN has many implications for broader work and research. This is just the beginning of using an IR in the K-12 market. DSpace is a powerful platform that may be used for many types of digital assets. It would be beneficial to be used to include model lesson plans, curriculum documents, and local school history. By creating additional communities, it is possible to provide each of these types of areas a unique space. NEISD will investigate broader implementation of DSpace.

The possibilities of the future for this project are endless. However, to be more strategic in this thinking, it would be prudent to include an application programming interface (API) specification. The inclusion of an API would allow the library catalog and the IR to communicate. This would eliminate the need to alter the MARC record manually. This solution would work similar to how cover art, book reviews, and other content from a third party vendor appears in the OPAC.

Another future direction would be to recruit additional partners. The goal for this change would be to increase the number of digital assets in the NBN, and promote the sharing of content. It would be beneficial to find other school districts that would be willing to partner with NEISD because it would give students a broader audience in which to share their work and reduce the hosting costs.

NEISD has renewed its relationship with Longsight for 2012-2013, and there is a commitment to increase the use of the IR to house these types of digital assets.

### **Project Resources**

NBN Website: <https://nbn.neisd.net>

This link provides direct access to teacher and student created digital book trailers.

NBN LibGuide: <http://neisd.libguides.com/nbn>

The NBN LibGuide provides training and marketing materials created for the implementation of this project. Such resources include resources such as directions to add a book trailer to NBN; directions that instruct how to approve book trailers; a "Digital Works Permission Form" in English & Spanish; promotional posters and bookmarks, and how to saving a completed Animoto book trailer.